# HP DECprint Supervisor (DCPS) for OpenVMS

# Release Notes

**October 2003**

This manual contains information about the current release of DCPS.

| | |
|---|---|
| **Revision/Update Information:** | These release notes supersede all other documentation. |
| **Software Version:** | HP DECprint Supervisor (DCPS) for OpenVMS, Version 2.3 |
| **Operating System:** | HP OpenVMS Alpha, Version 6.2, 7.2-2, 7.3 or 7.3-1<br>HP OpenVMS VAX, Version 5.5-2, 7.2 or 7.3 |

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The DECprint Supervisor documentation set is available on CD-ROM.

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# Preface

## Intended Audience

These release notes describe new features, bug fixes, usage hints, restrictions and other useful information for this release of DECprint Supervisor. System managers and users should review this document for new information about installing and using this release of DCPS.

**Note**

Starting with DCPS V2.0, the need for DCPS-OPEN and DCPS-PLUS licenses has been eliminated. The right to use all features of DCPS is now included with the OpenVMS operating system license.

## Document Structure

These release notes contain the following chapters and appendices:

- Chapter 1 describes changes included in DCPS V2.3.
- Chapter 2 describes how to create DCPS LPD queues.
- Chapter 3 provides information about using DCPS with specific printers.
- Chapter 4 identifies current restrictions that exist with DCPS V2.3.
- Chapter 5 contains information about OpenVMS operating system problems that are known to impact DCPS.
- Appendix A lists commonly-used port numbers used when setting up IP printers.
- Appendix B lists files installed by DCPS V2.3 on OpenVMS Alpha systems.
- Appendix C lists files installed by DCPS V2.3 on OpenVMS VAX systems.

## Related Documents

The primary source of information about DCPS is the following set of software manuals:

**Table 1 DECprint Supervisor Documentation**

| | |
|---|---|
| *Software Installation Guide* | Describes how to install DCPS |
| *System Manager's Guide* | Describes how system managers, data center operators and application programmers can create and manage DCPS print queues and solve printing problems. |
| *User's Guide* | Describes how to use DCPS to print to PostScript printers. |
| *Software Product Description (SPD 44.15.xx)* | Contains the full list of printers supported by DCPS and additional information about the features and requirements of DCPS V2.3. |

For additional information about HP OpenVMS products and services, visit the following World Wide Web address:

`http://www.hp.com/go/openvms/`

## Reader's Comments

HP welcomes your comments on this manual. Please send comments to either of the following addresses:

| | |
|---|---|
| Internet | **openvmsdoc@hp.com** |
| Mail | Hewlett-Packard Company<br>OSSG Documentation Group, ZKO3-4/U08<br>110 Spit Brook Road<br>Nashua NH 03062-2698 |

## How to Order Additional Documentation

For information about how to order additional documentation, visit the following World Wide Web address:

`http://www.hp.com/go/openvms/doc/order/`

Part numbers for DCPS-related documentation are listed in the *Ordering Additional Documentation* appendix of the *Software Installation Guide*, *System Manager's Guide* and *User's Guide*.

## Conventions

The following conventions are used in this manual:

| | |
|---|---|
| Ctrl/*x* | A sequence such as Ctrl/*x* indicates that you must hold down the key labeled Ctrl while you press another key or a pointing device button. |
| Return | In examples, a key name enclosed in a box indicates that you press a key on the keyboard. (In text, a key name is not enclosed in a box.)<br>In the HTML version of this document, this convention appears as brackets, rather than a box. |

| | |
|---|---|
| . . . | A horizontal ellipsis in examples indicates one of the following possibilities:<br>• Additional optional arguments in a statement have been omitted.<br>• The preceding item or items can be repeated one or more times.<br>• Additional parameters, values, or other information can be entered. |
| ( ) | In command format descriptions, parentheses indicate that you must enclose choices in parentheses if you specify more than one. |
| [ ] | In command format descriptions, brackets indicate optional choices. You can choose one or more items or no items. Do not type the brackets on the command line. However, you must include the brackets in the syntax for OpenVMS directory specifications and for a substring specification in an assignment statement. |
| \| | In command format descriptions, vertical bars separate choices within brackets or braces. Within brackets, the choices are optional; within braces, at least one choice is required. Do not type the vertical bars on the command line. |
| { } | In command format descriptions, braces indicate required choices; you must choose at least one of the items listed. Do not type the braces on the command line. |
| **bold text** | This typeface represents the introduction of a new term. It also represents the name of an argument, an attribute or a reason. |
| *italic text* | Italic text indicates important information, complete titles of manuals or variables. Variables include information that varies in system output (Internal error *number*), in command lines (/PRODUCER=*name*) and in command parameters in text (where *dd* represents the predefined code for the device type). |
| UPPERCASE TEXT | Uppercase text indicates a command, the name of a routine, the name of a file, or the abbreviation for a system privilege. |
| `Monospace text` | Monospace type indicates code examples and interactive screen displays. |
| - | A hyphen at the end of a command format description, command line or code line indicates that the command or statement continues on the following line. |
| numbers | All numbers in text are assumed to be decimal unless otherwise noted. Nondecimal radixes—binary, octal or hexadecimal—are explicitly indicated. |

# 1
# DCPS Version 2.3 Information

This section describes changes included in DCPS V2.3. You can find more information for several of these changes elsewhere in these release notes.

## 1.1 DCPS Version 2.3 Changes

### 1.1.1 New Printers Supported

DCPS V2.3 adds support for the following printers:

HP Color LaserJet 3700
HP Color LaserJet 8500†
HP Color LaserJet 8550†
HP Color LaserJet 9500
HP LaserJet 2300
HP LaserJet 9055 MFP
HP LaserJet 9065 MFP

### 1.1.2 LPD Printing Supported

DCPS now allows jobs to be printed using the IP LPD protocol. See Chapter 2 for more information.

## 1.2 DCPS Version 2.3 Fixes

The following problems are fixed in DCPS V2.3.

### 1.2.1 Raw TCP Jobs Put on Hold and Queues Stopped

Starting with DCPS V1.8, some jobs printed with the Raw TCP protocol would be put on hold and their queues stopped. This behavior was often seen when a printer became unresponsive for some reason, particularly with the DIGITAL Laser Printer LN20 and LN40, and the Compaq or DIGITAL Laser Printer LNC02 printers. Usually there was no indication that the job was put on hold or that the queue was stopped, but sometimes a message like the following was seen:

```
%%%%%%%%%%  OPCOM  25-MAR-2003 12:03:22.09  %%%%%%%%%%
Message from user SYSTEM on FUNYET
Queue LN20: %DCPS-F-BADPARAM, bad parameter value
```

The problem was seen when a pending job would start to print and the printer was not ready to accept the job. DCPS V2.3 fixes this problem, as well as allowing jobs in queues for printers not currently available to wait and start printing when the printer becomes available.

† LPD and AppleTalk only

## 1.2.2 Stapling Errors

### 1.2.2.1 Offending Command Error

When requesting stapling on the HP LaserJet 8000, 8100, 8150, 9000 and 9000mfp printers, the job would fail and produce the following error:

```
%DCPS-W-UNDEF, undefined: Name not known - offending command is kaka
```

### 1.2.2.2 Stapling Not Supported Error

On some printers, some stapling options would cause the job to fail and produce the following error:

```
%DCPS-E-STPOUTTRAY, Selected output tray does not support stapling
```

The conditions under which this error could be returned were:

- Requesting a stapled job without specifying the output tray to a printer where the default output tray was a valid tray for stapling.
- Specifying the STAPLE=NONE parameter, used to override a printer's default setting for stapling.

## 1.2.3 Setup Mode Problems

### 1.2.3.1 DCPS$STARTUP.COM Problems

Starting with DCPS V2.2, the DCPS startup procedure can be run in a faster "setup" mode. This is done through automatic creation of a setup file containing required logical name definitions. Due to a problem with DCPS V2.2, subsequent changes to DCPS$STARTUP.COM would not take effect the next time startup was run in setup mode.

Specifically, new queues would not be created or started, and changes to existing queues would not be made. No message indicating this condition was displayed.

To fix this problem, you must copy the new DCPS$STARTUP.TEMPLATE to .COM and then include your site-specific changes. Otherwise, you will not be able to run in setup mode and the following messages will be displayed:

```
$ @SYS$STARTUP:DCPS$STARTUP SETUP
%DCPS-I-STARTING, DECprint Supervisor V2.3 starting...
%DCPS-W-COPYNEW, copy new template to use setup mode
%DCPS-I-NORMALMODE, startup running in normal mode
%DCPS-I-NEWSETUPFILE, creating new version of setup file
```

Once your startup file is using the new template, if DCPS$STARTUP.COM has been changed since the most recent setup file was created, the following will occur:

- Startup runs in normal mode.
- A new setup file is created so future executions will run in setup mode.
- A message is displayed indicating why setup mode is not being used:

```
$ @SYS$STARTUP:DCPS$STARTUP SETUP
%DCPS-I-STARTING, DECprint Supervisor V2.3 starting...
%DCPS-W-OLDSETUP, setup file older than startup file
 Startup file SYS$COMMON:[SYS$STARTUP]DCPS$STARTUP.COM;62
  created 14-AUG-2003 13:52:29
 Setup file SYS$COMMON:[SYS$STARTUP]DCPS$STARTUP_SETUP.COM;143
  created 11-JUN-2003 19:24:45
%DCPS-I-NORMALMODE, startup running in normal mode
%DCPS-I-NEWSETUPFILE, creating new version of setup file
```

#### 1.2.3.2 Other Setup Mode Changes

In addition to the changes described above, the following changes to setup mode have been made in DCPS V2.3:

- If the startup procedure is interrupted by a Ctrl/Y or system crash, for example, the setup file being created could be incomplete. This would cause some queues to not start the next time startup was run. Therefore, a new setup file is not created.
- The setup file DCPS$STARTUP_SETUP.COM is now always placed in the SYS$COMMON:[SYS$STARTUP] directory. DCPS V2.2 placed the setup file in the same directory as the running DCPS$STARTUP.COM, which could cause confusion if DCPS$STARTUP.COM were run from different directories at different times.

### 1.2.4 PJL Messages

Printers sometimes send out unsolicited PJL messages that DCPS then displays on the screen as user data. This can be caused by previous print jobs from other operating systems that change printer characteristics so that all future jobs send back these messages. While these messages are often harmless, sometimes they can interfere with DCPS communications to the printer.

Sometimes, the PJL messages can interfere with DCPS and cause the DCPS job to stall and never print. For this reason, two new logical names that will suppress PJL messages from being sent from the printer are being introduced in DCPS V2.3.

The recommended method for suppressing PJL messages is to define the logical name DCPS$*queuename*_SUPPRESS_PJL_MESSAGES for each queue having the problem. For example, to suppress PJL messages on a queue called HP4200:

```
$ DEFINE /EXECUTIVE_MODE /SYSTEM DCPS$HP4200_SUPPRESS_PJL_MESSAGES TRUE
```

You can suppress PJL messages on all DCPS queues with the logical name DCPS$SUPPRESS_PJL_MESSAGES, but you should use this logical name with caution. Defining the logical name causes DCPS to send the PJL commands to the printer to suppress PJL messages. Since some printers do not support PJL commands, defining the logical name for such queues will cause the printer to hang and the job to stall. If you are unsure if all your printers support PJL commands, define the logical name for individual queues.

You do not need to stop and restart the queue after defining the logical name.

**Note**

These new logical names replace the unsupported command procedure UNSOLICITED-PJL-FIX.COM and provide improved functionality.

### 1.2.5 Duplicate Form Number

DCPS uses form number 1115 for the default DCPS form DCPS$DEFAULT. Previously, if you already had a form defined with number 1115, the DCPS startup procedure would fail with the error message:

```
%JBC-E-DUPFORM, duplicate form number
```

Now, if form number 1115 is already in use, DCPS will use the next available number to define the DCPS$DEFAULT form. One or more DUPFORM messages will still appear, but they will not cause the startup procedure to fail.

# 2
# LPD Printing

DCPS now supports printing with the LPD protocol. This chapter explains how to set up a DCPS LPD queue and contains additional information about using DCPS over LPD.

## 2.1 LPD Restrictions

Because the LPD protocol is uni-directional, as opposed to the other protocols used by DCPS which are bi-directional, there are some restrictions to its use:

- The printer cannot return printer messages that occur during the printing of your job, so DCPS cannot report them. For example, you will not receive messages about paper jams or empty trays.
- The printer cannot report its current state to DCPS. Therefore, checks that DCPS performs to ensure your job is printed correctly cannot be performed. For example, if you specify paper size and input tray for your print job, and the specified paper size is not loaded in the specified tray, your job may print from either the wrong tray or on the wrong size paper. If the error causes a PostScript error, you may see the error reported on the printer, but only if PostScript error reporting has been enabled on the printer.
- DCPS LPD queues do not work with remote LPD queues, where print jobs are sent to other systems instead of directly to a printer. This restriction may be lifted in future DCPS versions.

## 2.2 Creating an LPD queue

To create a DCPS LPD queue, specify IP_LPD as the protocol in parameter P2 in DCPS$STARTUP.COM:

```
$ IF .NOT. SETUP_MODE THEN @SYS$STARTUP:DCPS$EXECUTION_QUEUE -
    queue_name -                                        ! P1
    "IP_LPD/printer_name_or_address" -                  ! P2
    DCPS_LIB                                            ! P3
```

For most printers, specifying the name or address of the printer is sufficient for LPD printing. However, some printers require an internal print queue name to be used for LPD. If your printer requires an internal queue name to be specified, do so after the printer name or address, separated by a colon:

```
$ IF .NOT. SETUP_MODE THEN @SYS$STARTUP:DCPS$EXECUTION_QUEUE -
    queue_name -                                        ! P1
    "IP_LPD/printer_name_or_address:internal_name" -    ! P2
    DCPS_LIB                                            ! P3
```

Check your printer's documentation for the internal queue name required, if any, for LPD printing. If your printer needs an internal queue name to be specified and your DCPS LPD queue does not specify it, jobs sent to that queue will remain

in a “starting” state and never print. You may also see CONTERMINATED error messages.

The internal queue name is the `rp` field in printcap entries, as used with the LPD symbiont in TCP/IP Services for OpenVMS and with other operating systems. Some printers that require this internal queue name are:

**Table 2–1 Internal LPD Queue Names**

| Printer | Internal Queue Name |
|---|---|
| DIGITAL Colorwriter LSR 2000 | xjprint |
| DIGITAL DEClaser 3500 | PORT1 |
| DIGITAL Laser Printer LN17+ps | PASSTHRU |
| DIGITAL LN17ps | PASSTHRU |

## 2.3 LPD Logical Names

### 2.3.1 Sheet Size

The new logical names DCPS$SHEET_SIZE and DCPS$*queuename*_SHEET_SIZE are used to tell DCPS about the printer’s default paper size. The system-wide logical name DCPS$SHEET_SIZE is defined in DCPS$STARTUP.COM to be LETTER. If you use a different paper size at your site, change or redefine the value of this logical name. You can also change the value for individual queues by defining a value for the queue-specific DCPS$*queuename*_SHEET_SIZE.

For example, to specify A4 as the default paper size system-wide:

```
$ DEFINE /EXECUTIVE_MODE /SYSTEM DCPS$SHEET_SIZE A4
```

To specify LEGAL as the default paper size for a queue called LAWYERS:

```
$ DEFINE /EXECUTIVE_MODE /SYSTEM DCPS$LAWYERS_SHEET_SIZE LEGAL
```

The definition of the DCPS$SHEET_SIZE logical name is in the new version of DCPS$STARTUP.TEMPLATE shipped with this version of DCPS. You should copy DCPS$STARTUP.TEMPLATE to .COM and edit the resulting DCPS$STARTUP.COM with your site-specific changes.

Note the following behavior concerning the sheet size logical name:

- If neither the system-wide nor queue-specific version of this logical name are defined, the default sheet size is set to LETTER.
- If the sheet size is defined to be a size that does not exist on the printer, the job will not print and no error message will be received.
- The logical name only affects LPD queues. It is ignored for all other queue types.

### 2.3.2 Product Name

Most DCPS LPD queues will use printers unrecognized by DCPS, so most queues will not require the use of this logical name. However, you might want to use LPD to print to a DCPS-supported printer. For example, the HP Color LaserJet 8500 and 8550, DIGITAL Colorwriter LSR 2000 and DEClaser 3500 are not supported by DCPS with any other IP protocol, but can now be used with LPD.

If you have a DCPS-supported printer that you want to use with LPD, you must define the DCPS$*queuename*_PRODUCT_NAME logical name to be the PostScript product name of the printer as shown in Table 2–2. For example, to set up a queue called BIG_COLOR to an HP Color LaserJet 8550 printer:

```
$ DEFINE /EXECUTIVE_MODE /SYSTEM DCPS$BIG_COLOR_PRODUCT_NAME -
  "HP Color LaserJet 8550"
```

You must specify the product name exactly, including capitalization and spacing. Note that some product names include a trailing space. If you specify "HPGENERIC", your printer will be treated as an "HP Generic" printer. If you specify any other string, your printer will be treated as an "unrecognized" printer.

**Table 2–2 Supported Product Names**

"Colormate PS"

"Colormate PS40"

"Colormate PS80"

"Colorwriter 1000"

"Colorwriter LSR 2000"

"Compaq Laser Printer LN16"

"Compaq Laser Printer LN32"

"Compaq Laser Printer LNC02"

"Compaq Laser Printer LNM40"

"DECcolorwriter 1000"

"DEClaser 1150"

"DEClaser 1152"

"DEClaser 2150"

"DEClaser 2250"

"DEClaser 3250"

"DEClaser 3500"

"DEClaser 5100"

"DIGITAL Laser Printer LN15"

"DIGITAL Laser Printer LN20"

"DIGITAL Laser Printer LN40"

"DIGITAL Laser Printer LNC02"

"GENICOM Intelliprint cL160"

"GENICOM Intelliprint mL260"

(continued on next page)

**Table 2–2 (Cont.) Supported Product Names**

"GENICOM Intelliprint mL402"
"GENICOM Intelliprint mL450"
"GENICOM LN21"
"GENICOM LN28"
"GENICOM LN45"
"GENICOM LNM40"
"GENICOM microLaser 170"
"GENICOM microLaser 210"
"GENICOM microLaser 280"
"GENICOM microLaser 320"
"GENICOM microLaser 401"
"hp color LaserJet 2500"
"hp color LaserJet 3700"
"HP Color LaserJet 4500"
"HP Color LaserJet 4550 "
"hp color LaserJet 4600"
"hp color LaserJet 5500"
"HP Color LaserJet 8500"
"HP Color LaserJet 8550"
"hp color LaserJet 9500"
"HP LaserJet 2100 Series"
"HP LaserJet 2200"
"hp LaserJet 2300 series"
"HP LaserJet 4 Plus"
"HP LaserJet 4000 Series"
"HP LaserJet 4050 Series "
"HP LaserJet 4100 MFP "
"HP LaserJet 4100 Series "
"hp LaserJet 4200"
"hp LaserJet 4300"
"HP LaserJet 4ML"
"HP LaserJet 4MP"
"HP LaserJet 4PJ"
"HP LaserJet 4Si"
"HP LaserJet 4V"
"HP LaserJet 5000 Series"
"HP LaserJet 5100 Series"
"HP LaserJet 5M"
"HP LaserJet 5Si"

(continued on next page)

**Table 2–2 (Cont.) Supported Product Names**

"HP LaserJet 8000 Series"
"HP LaserJet 8100 Series"
"HP LaserJet 8150 Series"
"HP LaserJet 9000 MFP "
"HP LaserJet 9000 Series "
"HP LaserJet III"
"HP LaserJet IIID"
"HP LaserJet IIISi"
"HP LaserJet IIP"
"Hewlett-Packard LaserJet IIISi"
"IBM InfoPrint 32/40"
"IBM Infoprint 21"
"LN17ps"
"LPS17"
"LPS17/600"
"LPS20"
"LPS20+"
"LPS32"
"LPS40"
"LPS40+"
"LaserJet 4"
"LaserJet II"
"LaserWriter II NT"
"LaserWriter II NTX"
"LaserWriter IIf"
"LaserWriter IIg"
"LaserWriter Personal NTR"
"LaserWriter Plus"
"LaserWriter Pro 600"
"LaserWriter Pro 630"
"LaserWriter Pro 810"
"LaserWriter Select 310"
"LaserWriter Select 320"
"LaserWriter Select 360"
"Lexmark C720"
"Lexmark C750"
"Lexmark C910"
"Lexmark Optra C710"
"Lexmark Optra LaserPrinter"

(continued on next page)

**Table 2–2 (Cont.) Supported Product Names**

"Lexmark Optra S 1250"
"Lexmark Optra S 1255"
"Lexmark Optra S 1620"
"Lexmark Optra S 1625"
"Lexmark Optra S 1650"
"Lexmark Optra S 1855"
"Lexmark Optra S 2420"
"Lexmark Optra S 2450"
"Lexmark Optra S 2455"
"Lexmark Optra Se 3455"
"Lexmark Optra T610"
"Lexmark Optra T612"
"Lexmark Optra T614"
"Lexmark Optra T616"
"Lexmark Optra W810"
"Lexmark T520"
"Lexmark T522"
"Lexmark T620"
"Lexmark T622"
"Lexmark W820"
"Phaser 200e"
"Phaser 200i"
"Phaser 220e"
"Phaser 220i"
"Phaser 300i"
"Phaser 740"
"Phaser 740E"
"Phaser 740P"
"Phaser 750DP"
"Phaser 750DX"
"Phaser 750N"
"Phaser 780GN"
"Phaser 780N"
"Phaser 850DP"
"Phaser 850DX"
"Phaser 850N"
"Phaser III PXi"
"ScriptPrinter"
"Xerox DocuPrint N2025"

(continued on next page)

**Table 2–2 (Cont.) Supported Product Names**

| |
|---|
| "Xerox DocuPrint N2125" |
| "Xerox DocuPrint N24" |
| "Xerox DocuPrint N2825" |
| "Xerox DocuPrint N32" |
| "Xerox DocuPrint N3225" |
| "Xerox DocuPrint N40" |
| "Xerox DocuPrint N4025" |

# 3
# Printer-Specific Information

The following sections provide information about using DCPS with specific printers. The *DCPS System Manager's Guide* and *DCPS User's Guide* contain additional printer-specific information.

## 3.1 Problems Starting Queues

Some HP printers do not respond to the DCPS synchronization request at the beginning of a job. Therefore, you must upgrade the printer's firmware to at least the version shown in Table 3–1 or define the logical name DCPS$*queuename*_NO_SYNC before queues to these printers are started, or DCPS jobs will not start. See Section 4.2 in these Release Notes or the *DCPS System Manager's Guide* for more information.

It is also recommended that the printer's personality setting be set to PS (PostScript). Setting the printer's personality to PS (PostScript) alone will not solve the problem for these printers. This problem is resolved in the following versions of printer firmware:

**Table 3–1 Minimum Recommended Firmware**

| Printer | Firmware |
|---|---|
| HP Color LaserJet 2500 | future release |
| HP Color LaserJet 5500 | 20030605 04.016.2 |
| HP LaserJet 2300 | 20030530 04.047.2 |
| HP LaserJet 4200 | 20030530 04.016.1 |
| HP LaserJet 4300 | 20030530 04.016.1 |

Your printer's firmware version is displayed as "Firmware Datecode" on the printed configuration page, the printer's web page and the WebJetAdmin printer management utility.

Printer firmware and instructions for downloading it to your printer can be obtained from the HP web page. Choose *Printing and Multifunction* and then *Support and Drivers*.

# 4
# DCPS Restrictions

The following sections identify the current restrictions that exist with DCPS. See the *DCPS System Manager's Guide* and *DCPS User's Guide* for printer-specific restrictions.

## 4.1 Printers with Auto-Sensing Features

Many printers can sense the data type of a print job. Such printers allow you to specify how and whether the auto-sensing feature is enabled, per interconnect channel, through the front panel or printer management software.

For most printers that offer this feature, the DCPS software works properly when the printer is set to "PostScript" mode or to "Auto-Sensing" mode. You must set such printers to operate in one of these modes before starting the DCPS queues. The DCPS software does not operate properly if the printer is set to "PCL" mode.

See Chapter 3 and the *DCPS System Manager's Guide* for additional information.

## 4.2 Job Remains in Starting State for Raw TCP/IP or LAT Queue

Most printers respond to the PostScript synchronization command at the beginning of a DCPS job, but some do not. If all jobs to a queue remain in the Starting state, you may need to take one of the following steps:

- Change Printer Language Setting

  Often, setting the printer's language-sensing mode to PostScript, instead of auto-sensing between PostScript and PCL, will solve the problem. Refer to your printer documentation for instructions on changing the language for the appropriate port. This is the preferred method for avoiding the problem.

- Define NO_SYNC Logical Name

  If the problem is not solved by changing the printer setting, you can tell DCPS to skip the PostScript synchronization command by defining the logical name DCPS$*queuename*_NO_SYNC and restarting the queue. This works with printers that use Raw TCP/IP or LAT connections on built-in Network Interface Cards (NICs). It has no effect when using printers connected with other interconnects.

## 4.3 Job Remains in Starting State for Raw TCP/IP Queue

If you set up a DCPS queue that uses a Raw TCP/IP connection and specify an incorrect TCP port number for the printer, any print jobs that you submit to the queue will remain in a starting state. DCPS cannot determine that you have provided an incorrect port number, because the network failure that it receives is no different than if the printer had been busy or offline.

Note that a print job in a Raw TCP/IP queue may remain in a starting state for other reasons as well.

Check the documentation for your printer, network interface card, print server, or terminal server to determine the correct TCP port number to use. The TCP port number may also be listed in Table A–1.

## 4.4 Connection Terminations for Raw TCP/IP Queue

You may get CONTERMINATED errors for long print jobs when using Raw TCP/IP connections, especially with printers that have large memory or disks for spooling data, such as the HP Color LaserJet 9500 and LaserJet 9055mfp and 9065mfp printers.

For jobs that consist of a single file or that only use the native PostScript capability of the printer, these errors are most likely to occur at the end of the job, with job trailer pages (if specified) and print job accounting (if enabled) being lost. For other jobs, these errors may occur in the middle of the job, with subsequent documents as well as the trailer pages and accounting information being lost. DCPS requeues the terminated jobs, placing them in a Holding state so that you can reprint them once you resolve the termination problem.

Some network devices, including HP JetDirect cards, drop a TCP/IP connection if they do not receive any input from the host system within a specified amount of time. This is a feature meant to prevent host software from monopolizing the device. DCPS, however, waits for the printer to acknowledge that previous documents are printed before switching from PostScript to some other native printer language and also before printing a trailer page and gathering accounting information. Even though the printer may be busy, the NIC may not receive any more input from DCPS before the timeout is reached.

If your NIC allows you to alter the TCP/IP idle timeout value, you can work around this problem by disabling or increasing the timeout. Check your NIC documentation to determine if and how this is possible. (Recent HP printers call this setting the TCP/IP "idle timeout".) Then release any requeued jobs for which desired output was lost, and delete the other requeued jobs.

Note that it is the length of a job in time (versus size) that is important. For example, a small PostScript program can take a long time to print. Therefore, it is difficult to predict how large a timeout is adequate.

## 4.5 NOT_READY Warnings for Unavailable Raw TCP/IP Printer

If a job is queued to a printer that uses a Raw TCP/IP connection, and the printer is busy or offline, you will get NOT_READY warning messages for the printer.

If you believe or determine that the printer is busy, you can ignore these messages. DCPS cannot differentiate between the printer being busy, offline or otherwise unavailable.

## 4.6 Translators Do Not Generate Color PostScript

The translators provided with DCPS (for example, ReGIS) do not generate color PostScript commands, even if your source file contains color information. The colors are instead translated to various shades of gray.

## 4.7 Job Trailer Page Jogs with PostScript Level 2 Printers

When job jogging is enabled on PostScript Level 2 printers, jogging occurs between the body of a job and its trailer page (if any).

## 4.8 Unable to Perform ANSI Tray Selection for Certain Printers

An attempt to print an ANSI file containing a tray selection escape sequence might fail, depending on which printer you are using. If so, the job might abort with a PostScript configuration error, with the offending command being "setpapertray".

Also, some printers, such as the Compaq Laser Printer LN16 and GENICOM microLaser 170, have input trays with PostScript tray numbers of 0. The ANSI escape sequence DECASFC is used to select trays, but a value of 0 means "no tray change" and selecting tray 0 is therefore not possible. For example, an ANSI escape sequence of

```
<CSI>0!v
```

does not select tray 0, but rather indicates no change of tray.

A workaround to this problem is to create and subsequently invoke a setup module that redefines the settoptray, setbottomtray, setlcittray and setmanualfeedtray PostScript commands within the TRN$XLATE_DICT dictionary.

For example, for a Compaq Laser Printer LN16, DIGITAL Laser Printer LN15 or LN15+, or GENICOM microLaser 170, you should create a setup module that contains the following definitions for settoptray, setbottomtray and setmanualfeedtray:

```
TRN$XLATE_DICT begin
  /settoptray        { statusdict begin 0 setpapertray end } def
  /setbottomtray     { statusdict begin 1 setpapertray end } def
  /setmanualfeedtray { statusdict begin 3 setpapertray end } def
end
```

For an HP LaserJet 4M Plus, you should create a setup module that contains:

```
TRN$XLATE_DICT begin
  /settoptray    { statusdict begin 3 setpapertray end } def
  /setbottomtray { statusdict begin 0 setpapertray end } def
  /setlcittray   { statusdict begin 1 setpapertray end } def
end
```

PostScript tray numbers are documented in the *DCPS User's Guide*.

## 4.9 AppleTalk Queues Do Not Start or Jobs Remain in Starting State

The first print queue in the process to use AppleTalk fails with the following error and the queue does not start:

```
%DCPS-W-ATK_FOR_VMS, Error connecting to AppleTalk for VMS driver
```

If other queues using the AppleTalk interconnect are started on that same process this error is not reported. These queues will start, but jobs on these queues remain in the "starting" state.

If a queue using the AppleTalk interconnect is started before the AppleTalk network software is running, then the queue might start but will not be functional. This occurs when DCPS is running as a multistreamed symbiont and another print queue is running in the same process.

To recover from such an error, stop all queues supported by any currently running symbiont processes that have detected that the AppleTalk network software is not running (one error message is generated per symbiont process). Restart the AppleTalk software and the queues.

To avoid this problem, run the AppleTalk network software before starting any DCPS print queues.

## 4.10 Some Printers Do Not Send Status Messages to the Host

Because of their internal architecture, some PostScript printers report status information only to the printer console and not to the host system with which they are communicating. As a result, DCPS is not aware of some status conditions (for example, paper out, paper jam, page too complex and cover open) and cannot report them to you. Instead, the DCPS queue will enter the Stalled state if DCPS subsequently attempts to communicate with the printer. This subsequent attempt may come during the same job that first experienced the problem or in a later one.

The following is a list of some of the printers which exhibit this behavior:

- DEClaser 5100 printer
- LN17ps printer
- some HP LaserJet III and IV printers (but not the HP LaserJet III with the HP PostScript-Plus Level 2 cartridge or the HP LaserJet IIISi if jam recovery is disabled)

## 4.11 Printer Name Is Not Always Printed Correctly

When multinational characters are used in the PostScript "printername", the printer name printed on the bottom of separation pages may be printed in the wrong character set.

## 4.12 DDIF Printing Requires DECwindows Software or DECimage Application Services

To print DDIF encoded bitonal images, DCPS requires that either DECwindows software or Version 3.1 of DECimage Application Services (DAS) be installed on your system. DAS is only available on OpenVMS VAX systems.

## 4.13 Compatibility of NUMBER_UP and PostScript Drivers

PostScript files created with the LaserWriter 8.0 or 8.1.1 driver or the Adobe 2.1.1 Windows driver, in conjunction with the user application, may produce PostScript files that do not print as expected with NUMBER_UP greater than 1.

Symptoms include pages being clipped, printed outside of the NUMBER_UP page spots, or being improperly scaled.

## 4.14 LIST Translator Ignores PAGE_SIZE Parameter

The LIST translator ignores the PAGE_SIZE parameter when formatting pages. It creates pages with maximum content at a size adequate for both A (Letter) and A4 paper:

PORTRAIT ORIENTATION: 80 columns, 70 lines
LANDSCAPE ORIENTATION: 150 columns, 66 lines

It is still possible to use PAGE_SIZE and SHEET_SIZE parameters together to scale the logical page onto a different size sheet.

## 4.15 Embedded PJL Commands Discarded; Avoid Binary Mode

Drivers that create files for PJL printers, such as those for the DEClaser 5100 and the HP LaserJet IV family, include printer control commands in HP Printer Job Language (PJL). DCPS filters out and discards that data. Therefore, printer options selected by such drivers do not affect the print job.

When using these drivers, do NOT select binary mode. It will insert additional commands into the file that can cause incorrect behavior when printing via DCPS. The exact form of behavior depends on which printer is actually connected to the queue and whether or not the job passes through a DCPS translator.

## 4.16 Unreliable Communication After Errors on Some Printers

Unexpected errors can occur at the end of a print job when printing to some printers using the AppleTalk interconnect. The printers which can exhibit problems include the LaserWriter Pro 600, LaserWriter Pro 630, the LaserWriter IIg, and the LaserWriter IIf. Generally, the unexpected error occurs when an explainable error occurred during the print job; for example, a PostScript error which causes the PostScript interpreter to "Flush to the EOJ", or a timeout error while waiting for manual feed. The behavior a user may see includes one of more of the following:

- A second PostScript error or timeout error occurs
- DCPS unexpectedly loses communication with the printer
- The job trailer page (if specified) may not print
- The page count in the accounting file is not correct
- A delay of up to one minute before the job completes

The user's part of the print job prints as expected. The unexpected error occurs during the end of job processing (for example, getting the page count or the job trailer page printed) done by the DECprint Supervisor. Once the offending job is complete, subsequent jobs print as expected. No system operator intervention is needed.

## 4.17 Deleting Job When Using AppleTalk

When printing using an AppleTalk interconnect, a request to delete a job (DELETE /ENTRY) is accomplished by closing the connection to the printer. The AppleTalk protocol does not provide for interrupting the PostScript interpreter; therefore, the printer will continue to print page descriptions that are contained in its buffer before it stops printing the job. A job trailer page will not be printed.

## 4.18 Avoid STOP /QUEUE /RESET Usage for PrintServer Printer Which Is Rejecting Connections

If you issue a STOP /QUEUE /RESET command for a queue to a DIGITAL PrintServer printer while there is a job in the "Starting" state and while the printer is rejecting connections (because, for example, the PrintServer is powered off or is booting), the queue will stop. Occasionally the symbiont process will not terminate. Avoid issuing this command until the PrintServer printer becomes available. If the job is in the "Starting" state and also in the PrintServer printer's job queue, a STOP /QUEUE /RESET will execute correctly.

## 4.19 No Job Trailer Page on DELETE /ENTRY

If you issue a DELETE /ENTRY command when the printer is printing the job trailer page, it is possible to delete the printing of this page. Also, if you issue a DELETE /ENTRY command for a job printing on a PrintServer printer after all the data for the file is sent, it is possible that the job trailer page will not print.

## 4.20 Problems with PostScript Files When Printing with /COPIES

When you use the /COPIES qualifier with a PostScript file, DCPS surrounds each file with a PostScript "save" and "restore" to avoid exhausting virtual memory in the printer.

However, there are infrequent cases when the print job aborts with an invalid restore error message. If this occurs, use the /JOB_COUNT qualifier instead of /COPIES.

## 4.21 Problems Using PAGE_LIMIT with /JOB_COUNT

If you use the PAGE_LIMIT parameter with the /JOB_COUNT qualifier, you may get undesired results. In particular, if your intent is to suppress some initial pages of your job, DCPS will suppress them for the first copy of the job but print all pages of subsequent job copies. If your intent is to suppress some of the trailing pages of your job, DCPS will suppress them for the first copy of the job and omit subsequent job copies.

If you want multiple copies of your job with some pages suppressed, issue the PRINT command the desired number of times rather than using the /JOB_ COUNT qualifier.

## 4.22 Setting I/O Buffers Too Small May Produce OPCOM Errors

If the size of the I/O buffers (set by the SYSGEN parameter MAXBUF) is too small, the print queue will be stopped and the following message will be displayed to OPCOM:

```
%SYSTEM-E-EXQUOTA, process quota exceeded
```

If this error occurs, increase the value of the SYSGEN parameter MAXBUF.

# 5
# Other Restrictions that Affect DCPS

This section contains information about other problems that are known to impact DCPS and remedial patch kits (ECOs) that address some of these problems.

You can obtain these remedial patch kits (or an update to them)

- From an HP Customer Support Center
- From the HP IT Resource Center (ITRC) at http://www.itrc.hp.com

## 5.1 DCPS Processes Consume CPU

In certain situations, DCPS symbiont processes can consume excessive CPU time. For example, in the southern hemisphere when the time was moved forward at the October Daylight Savings Time adjustment, multithreaded processes such as DCPS went into a tight CPU loop. Stopping and restarting the processes resolved the problem. This problem is seen only on OpenVMS Alpha V7.3 and V7.3-1 systems.

This problem can happen again at the next daylight savings time adjustment unless the following patch is applied:

- VMS731_TDF-V0100, for OpenVMS Alpha V7.3-1 systems
- VMS73_TDF-V0100, for OpenVMS Alpha V7.3 systems

## 5.2 Starting Queue Causes Invalid Device Name Error

When initializing and starting an autostart DCPS queue that uses the Raw TCP protocol, the queue manager can fail with an "invalid device name" error.

```
%%%%%%%%%%  OPCOM  26-SEP-2002 09:33:42.58  %%%%%%%%%%
Message from user SYSTEM on LATEST
%QMAN-I-QUENOTSTART, queue TEST4 could not be started on node LATEST

%%%%%%%%%%  OPCOM  26-SEP-2002 09:33:42.58  %%%%%%%%%%
Message from user SYSTEM on LATEST
-QMAN-I-QUEAUTOOFF, queue TEST4 is now autostart inactive

%%%%%%%%%%  OPCOM  26-SEP-2002 09:33:42.58  %%%%%%%%%%
Message from user SYSTEM on LATEST
-SYSTEM-F-IVDEVNAM, invalid device name
```

The following patch kit fixes this problem:

- VMS731_QMAN-V0100, for OpenVMS Alpha V7.3-1 systems

## 5.3 DCPS Processes Consume Memory and Pagefile

Over time, DCPS print symbiont processes may consume increasing amounts of memory and pagefile space, resulting in system performance problems. This problem is seen only on OpenVMS Alpha V7.1-2 systems.

The following DECthreads patch kit fixes this problem:

- VMS712_PTHREADS-V0300, for OpenVMS Alpha V7.1-2 systems

## 5.4 Problems Starting Queues with Multistreamed Symbionts

All sites running DCPS as a multistreamed process on OpenVMS V7.1 and earlier should install the Queue Manager Remedial Update.

The Queue Manager remedial update kits are:

- ALPQMAN02_071, for OpenVMS Alpha V7.1 systems
- ALPQMAN05_070, for OpenVMS Alpha V7.0 systems
- ALPQMAN03_062, for OpenVMS Alpha V6.2 systems
- ALPQMAN04_061, for OpenVMS Alpha V6.1 systems
- VAXQMAN02_071, for OpenVMS VAX V7.1 systems
- VAXQMAN04_070, for OpenVMS VAX V7.0 systems
- VAXQMAN05_062, for OpenVMS VAX V6.2 systems
- VAXQMAN03_070, for OpenVMS VAX V5.5-2 through V6.1 systems

This update corrects problems that cause the START /QUEUE command to hang under certain circumstances when operating with a multistreamed symbiont. The release notes provided with the kit describe all the problems fixed by this update. After installing this update, you need to reboot your system to enable these changes.

If this update is not installed, you may encounter the following problem. If a queue running in a multistreamed process is stopped with STOP /QUEUE /RESET, then quickly started with START /QUEUE, the start request will hang. In addition, sometimes the following message will be written to OPCOM:

```
%DCPS-F-STREAMUSE, Request 4 for Stream Id n ignored.
Not consistent with symbiont state
```

To recover, issue a Ctrl/Y to return to the DCL prompt, then issue a STOP /QUEUE /RESET again, wait a few seconds, and try to start the queue again. To avoid this problem, install the queue manager update.

## 5.5 Problem Starting Queues for LAT- and Direct-Connected Printers

There is an OpenVMS V7.0 terminal driver problem that may hinder you in using DCPS with LAT- and direct-connected printers. The symptom is that the associated queue cannot be started, with messages like the following being written to OPCOM:

```
%%%%%%%%%%  OPCOM  31-OCT-1995 21:53:55.73  %%%%%%%%%%
Message from user SYSTEM on FUNYET
Queue SYS$PRINT: %DCPS-E-UNSUPPORTED, unsupported operation or function

%%%%%%%%%%  OPCOM  31-OCT-1995 21:53:55.74  %%%%%%%%%%
Message from user QUEUE_MANAGE on FUNYET
%QMAN-I-QUENOTSTART, queue SYS$PRINT could not be started on node FUNYET

%%%%%%%%%%  OPCOM  31-OCT-1995 21:53:55.74  %%%%%%%%%%
Message from user QUEUE_MANAGE on FUNYET
-SYSTEM-F-ABORT, abort
```

The failure may be constant or intermittent. If you subsequently attempt to start the queue, you may succeed.

The following patch kits fix this problem:

- ALPTTDR01_070, for OpenVMS Alpha V7.0 systems
- VAXTTDR01_070, for OpenVMS VAX V7.0 systems

## 5.6 I/O Errors for Serially-Connected Printers

There is an OpenVMS terminal driver problem that may result in your printer reporting I/O problems when connected to a serial port of your OpenVMS system. You may see the problem with OpenVMS Alpha V6.2 through V7.0, and with OpenVMS VAX V5.5 through V7.0, depending in part on what kind of serial port you are using.

The problem is that the terminal driver sometimes does not respond quickly enough to an XOFF request from the printer to prevent the printer from losing data.

This problem is fixed in OpenVMS Alpha V7.1.

The following patch kits fix this problem:

- ALPOPDR02_070, for OpenVMS Alpha V7.0 systems
- ALPOPDR04_062, for OpenVMS Alpha V6.2 systems

## 5.7 Symbiont Aborts with Insufficient Dynamic Memory Error

There is a DECthreads problem on OpenVMS VAX V7.0 and V7.1 systems that results in the DCPS symbiont aborting with an INSFMEM error. The DCPS symbiont consumes an increasing amount of memory over time, eventually aborting when it attempts to obtain more than the available dynamic memory. The probability of the symbiont aborting increases with each new print job that it processes.

The following patch kits fix this problem:

- VAXCMAR01_071, for OpenVMS VAX V7.1 systems
- VAXCMAR01_070, for OpenVMS VAX V7.0 systems

## 5.8 Symbionts Aborts with Access Violation or Bad Parameter Error

The DCPS symbiont can abort with an ACCVIO or BADPARAM error, possibly also indicating the CMA (DECthreads) facility, beginning 19 May 1997. Other software on your system, including DIGITAL TCP/IP Services for OpenVMS and anything layered upon DECthreads, may also fail after this date.

The problem is related to a long-standing OpenVMS restriction of fewer than 10,000 days in a delta-time value. POSIX-related software in particular, using the UNIX reference date of 1 January 1970, can encounter this limit on and after 19 May 1997. Refer to the OpenVMS web pages (`http://h71000.www7.hp.com/index.html`) for more information about the "Delta-Time Limit".

The following patch kits fix this problem:

- ALPLIBR07_070, for OpenVMS Alpha V6.1 to V7.0 systems
- VAXLIBR06_070, for OpenVMS VAX V5.5 to V7.0 systems

# A

# Raw TCP/IP Port Numbers

When setting up a DCPS queue using a Raw TCP/IP connection, check the documentation for your network interface card (NIC), print server or terminal server to determine the number of its Raw TCP/IP port (if it has one). The Raw TCP/IP port must support bidirectional communication between the printer and your OpenVMS system.

Table A–1 shows the port numbers for some commonly-used devices.

**Table A–1 Raw TCP/IP Port Numbers**

| | |
|---|---|
| 20nn | DECserver terminal servers, where "nn" is the physical port number |
| 2501 | DIGITAL LN17ps and DIGITAL Laser Printer LN17+ps<br>Emulex NICs |
| 3001 | DIGITAL Laser Printer LN15 and LN15+<br>DIGITAL RapidPrint 500 print server |
| 6869 | Compaq Laser Printer LNC02<br>DIGITAL Laser Printer LN20, LN40 and LNC02 |
| 9100 | Compaq Laser Printer LN16, LN32 and LNM40<br>GENICOM Intelliprint mL, LN and microLaser printers<br>GENICOM RapidPrint MPS100 print server<br>HP Color LaserJet printers<br>HP LaserJet printers<br>IBM InfoPrint printers<br>Lexmark C, Optra, S, Optra T, T and W series printers<br>Tektronix Phaser printers<br>Xerox DocuPrint N printers<br>HP JetDirect, Lexmark and XCD print servers |

# B

# List of Files Installed on Alpha Systems

| | |
|---|---|
| DCPS022.RELEASE_NOTES | [SYSHLP] |
| DCPS$HELP.HLP | [SYSHLP] |
| DCPS$SMBSHR.EXE | [SYSLIB] |
| DCPS$SMB.EXE | [SYSEXE] |
| DCPS$MSG.EXE | [SYSMSG] |
| DCPS$TRNPRC.EXE | [SYSLIB] |
| DCPS$BE_SERIAL.EXE | [SYSLIB] |
| DCPS$BE_CPAP.EXE | [SYSLIB] |
| DCPS$BE_APPLETALK.EXE | [SYSLIB] |
| TRN$DDIF_PS.EXE | [SYSLIB] |
| TRN$DDIF_IMAGE.EXE | [SYSLIB] |
| TRN$ANSI_PS.EXE | [SYSLIB] |
| TRN$PROPRINTER_PS.EXE | [SYSLIB] |
| TRN$PCL_PS.EXE | [SYSLIB] |
| TRN$LIST_PS.EXE | [SYSLIB] |
| TRN$REGIS_PS.EXE | [SYSLIB] |
| TRN$TEK4014_PS.EXE | [SYSLIB] |
| DCPS$DEVCTL.TLB | [SYSLIB] |
| DCPS$STARTUP.TEMPLATE | [SYS$STARTUP] |
| DCPS$REQUIRED.COM | [SYS$STARTUP] |
| DCPS$GET_VERSION.COM | [SYS$STARTUP] |
| DCPS$EXECUTION_QUEUE.COM | [SYS$STARTUP] |
| DCPS$GENERIC_QUEUE.COM | [SYS$STARTUP] |
| DCPS$IVP.COM | [SYSTEST] |
| DCPS$IVP_ANSI.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_POST.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_PCL.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_PROPRINTER.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_LIST.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_REGIS.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_TEK4014.DAT | [SYSTEST.DCPS] |
| LPS$SINGLEHOLES.LUP | DCPS$LAYUP: |
| LPS$DOUBLEHOLES.LUP | DCPS$LAYUP: |
| LPS$HOLES.LUP | DCPS$LAYUP: |
| LPS$NUP.LUP | DCPS$LAYUP: |
| COLOR-PRINTER-FULL-PAGE.LUP | DCPS$LAYUP: |
| COLORWRITER-2000-FULL-PAGE.LUP | DCPS$LAYUP: |
| PROPRINTER-FULL-PAGE.LUP | DCPS$LAYUP: |
| FULL-A4-LANDSCAPE.LUP | DCPS$LAYUP: |
| CPS_TO_DCPS_STARTUP.COM | [SYS$STARTUP] |
| LPS_ANSI_PROLOGUE.PS | [SYSHLP.EXAMPLES.DCPS] |
| UPDATE-ANSI-PROLOGUE.COM | [SYSHLP.EXAMPLES.DCPS] |
| FONT_DOWNLOADER.COM | [SYSHLP.EXAMPLES.DCPS] |
| LPS$SET_PRINTER_NAME.PS | [SYSHLP.EXAMPLES.DCPS] |
| LPS$SET_TIMEOUT.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_CONFIG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_DEVPARAM.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_STARTPG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_NOSTRTPG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_PRNTCNFG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_PSCRIPT.PS | [SYSHLP.EXAMPLES.DCPS] |
| FAX_3500_PRINTME.PS | [SYSHLP.EXAMPLES.DCPS] |
| DL3500_SEND_FAX_PS.PS | [SYSHLP.EXAMPLES.DCPS] |

```
DL3500_SEND_FAX_PS_SENDPS.PS              [SYSHLP.EXAMPLES.DCPS]
DL3500_SEND_FAX_TEXT.PS                   [SYSHLP.EXAMPLES.DCPS]
DL3500_SEND_FAX_TEXT_SENDPS.PS            [SYSHLP.EXAMPLES.DCPS]
DCPS$FILE_EXTENSION_DATA_TYPE.DAT_DEFAULT [SYSLIB]
UNSOLICITED-PJL-FIX.COM                   [SYSHLP.EXAMPLES.DCPS]
IGNORE-A-SIZE.PS                          [SYSHLP.EXAMPLES.DCPS]
DCPS$COMMON-PORT-SETTINGS.COM             [SYSHLP.EXAMPLES.DCPS]
DCPS$CONFIG-PRINTER-PORT.COM              [SYSHLP.EXAMPLES.DCPS]
DCPS$DS100-PORT-SETTINGS.COM              [SYSHLP.EXAMPLES.DCPS]
DCPS$DS200-PORT-SETTINGS.COM              [SYSHLP.EXAMPLES.DCPS]
DCPS$DS500-PORT-SETTINGS.COM              [SYSHLP.EXAMPLES.DCPS]
DCPS$GET-DS100-PORT-GROUPS.COM            [SYSHLP.EXAMPLES.DCPS]
DCPS$SET-DS-GROUPS.COM                    [SYSHLP.EXAMPLES.DCPS]
DCPS$SET-DS100-GROUPS.COM                 [SYSHLP.EXAMPLES.DCPS]
DCPS$SAVE-DS500-PORT.COM                  [SYSHLP.EXAMPLES.DCPS]
LPS$STATUSDICT.PS                         [SYSHLP.EXAMPLES.DCPS]
CONFIDENTIAL.PS                           [SYSHLP.EXAMPLES.DCPS]
INSTALL-PS-SUPPLEMENT.COM                 [SYSHLP.EXAMPLES.DCPS]
PS_SUPPLEMENT.PS                          [SYSHLP.EXAMPLES.DCPS]
NETPRINT.ZIP                              [SYSHLP.EXAMPLES.DCPS]
NETPRINT.TXT                              [SYSHLP.EXAMPLES.DCPS]
```

# C

# List of Files Installed on VAX Systems

| | |
|---|---|
| DCPS022.RELEASE_NOTES | [SYSHLP] |
| DCPS$HELP.HLP | [SYSHLP] |
| DCPS$SMBSHR.EXE | [SYSLIB] |
| DCPS$SMB.EXE | [SYSEXE] |
| DCPS$MSG.EXE | [SYSMSG] |
| DCPS$TRNPRC.EXE | [SYSLIB] |
| DCPS$BE_SERIAL.EXE | [SYSLIB] |
| DCPS$BE_CPAP.EXE | [SYSLIB] |
| DCPS$BE_APPLETALK.EXE | [SYSLIB] |
| TRN$DDIF_PS.EXE | [SYSLIB] |
| TRN$DDIF_IMAGE.EXE | [SYSLIB] |
| TRN$ANSI_PS.EXE | [SYSLIB] |
| TRN$PROPRINTER_PS.EXE | [SYSLIB] |
| TRN$PCL_PS.EXE | [SYSLIB] |
| TRN$LIST_PS.EXE | [SYSLIB] |
| TRN$REGIS_PS.EXE | [SYSLIB] |
| TRN$TEK4014_PS.EXE | [SYSLIB] |
| DCPS$DEVCTL.TLB | [SYSLIB] |
| DCPS$STARTUP.TEMPLATE | [SYS$STARTUP] |
| DCPS$REQUIRED.COM | [SYS$STARTUP] |
| DCPS$GET_VERSION.COM | [SYS$STARTUP] |
| DCPS$EXECUTION_QUEUE.COM | [SYS$STARTUP] |
| DCPS$GENERIC_QUEUE.COM | [SYS$STARTUP] |
| DCPS$IVP.COM | [SYSTEST] |
| DCPS$IVP_ANSI.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_POST.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_PCL.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_PROPRINTER.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_LIST.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_REGIS.DAT | [SYSTEST.DCPS] |
| DCPS$IVP_TEK4014.DAT | [SYSTEST.DCPS] |
| LPS$SINGLEHOLES.LUP | DCPS$LAYUP: |
| LPS$DOUBLEHOLES.LUP | DCPS$LAYUP: |
| LPS$HOLES.LUP | DCPS$LAYUP: |
| LPS$NUP.LUP | DCPS$LAYUP: |
| COLOR-PRINTER-FULL-PAGE.LUP | DCPS$LAYUP: |
| COLORWRITER-2000-FULL-PAGE.LUP | DCPS$LAYUP: |
| PROPRINTER-FULL-PAGE.LUP | DCPS$LAYUP: |
| FULL-A4-LANDSCAPE.LUP | DCPS$LAYUP: |
| CPS_TO_DCPS_STARTUP.COM | [SYS$STARTUP] |
| LPS_ANSI_PROLOGUE.PS | [SYSHLP.EXAMPLES.DCPS] |
| UPDATE-ANSI-PROLOGUE.COM | [SYSHLP.EXAMPLES.DCPS] |
| FONT_DOWNLOADER.COM | [SYSHLP.EXAMPLES.DCPS] |
| LPS$SET_PRINTER_NAME.PS | [SYSHLP.EXAMPLES.DCPS] |
| LPS$SET_TIMEOUT.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_CONFIG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_DEVPARAM.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_STARTPG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_NOSTRTPG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_PRNTCNFG.PS | [SYSHLP.EXAMPLES.DCPS] |
| DCW1000_PSCRIPT.PS | [SYSHLP.EXAMPLES.DCPS] |
| FAX_3500_PRINTME.PS | [SYSHLP.EXAMPLES.DCPS] |
| DL3500_SEND_FAX_PS.PS | [SYSHLP.EXAMPLES.DCPS] |

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DL3500_SEND_FAX_PS_SENDPS.PS                [SYSHLP.EXAMPLES.DCPS]
DL3500_SEND_FAX_TEXT.PS                     [SYSHLP.EXAMPLES.DCPS]
DL3500_SEND_FAX_TEXT_SENDPS.PS              [SYSHLP.EXAMPLES.DCPS]
DCPS$FILE_EXTENSION_DATA_TYPE.DAT_DEFAULT [SYSLIB]
DCPS$DELETE-LPS-CLIENT.COM                  [SYSHLP.EXAMPLES.DCPS]
UNSOLICITED-PJL-FIX.COM                     [SYSHLP.EXAMPLES.DCPS]
IGNORE-A-SIZE.PS                            [SYSHLP.EXAMPLES.DCPS]
DCPS$COMMON-PORT-SETTINGS.COM               [SYSHLP.EXAMPLES.DCPS]
DCPS$CONFIG-PRINTER-PORT.COM                [SYSHLP.EXAMPLES.DCPS]
DCPS$DS100-PORT-SETTINGS.COM                [SYSHLP.EXAMPLES.DCPS]
DCPS$DS200-PORT-SETTINGS.COM                [SYSHLP.EXAMPLES.DCPS]
DCPS$DS500-PORT-SETTINGS.COM                [SYSHLP.EXAMPLES.DCPS]
DCPS$GET-DS100-PORT-GROUPS.COM              [SYSHLP.EXAMPLES.DCPS]
DCPS$SET-DS-GROUPS.COM                      [SYSHLP.EXAMPLES.DCPS]
DCPS$SET-DS100-GROUPS.COM                   [SYSHLP.EXAMPLES.DCPS]
DCPS$SAVE-DS500-PORT.COM                    [SYSHLP.EXAMPLES.DCPS]
LPS$STATUSDICT.PS                           [SYSHLP.EXAMPLES.DCPS]
CONFIDENTIAL.PS                             [SYSHLP.EXAMPLES.DCPS]
INSTALL-PS-SUPPLEMENT.COM                   [SYSHLP.EXAMPLES.DCPS]
PS_SUPPLEMENT.PS                            [SYSHLP.EXAMPLES.DCPS]
NETPRINT.ZIP                                [SYSHLP.EXAMPLES.DCPS]
NETPRINT.TXT                                [SYSHLP.EXAMPLES.DCPS]
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